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IN THE

Supreme Court of the United States.

OCTOBER TERM, A. D. 1926.

No. [redacted] 182

CORONA CORD TIRE COMPANY,

Petitioner,

vs.

DOVAN CHEMICAL CORPORATION,

Respondent.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT.

DEAN S. EDMONDS,
FRANK E. BARROWS,
WILLIAM H. DAVIS,
Counsel for Petitioner.

The Evening Post Job Printing Office, Inc., 134 Fulton St., New York, N. Y.

IN THE

Supreme Court of the United States.

OCTOBER TERM, A. D. 1926.

CORONA CORD TIRE COMPANY,
Petitioner,

vs.

DOVAN CHEMICAL CORPORATION,
Respondent.

PETITION FOR WRIT OF CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT.

TO THE HONORABLE, THE CHIEF JUSTICE AND ASSOCIATE JUSTICES OF THE SUPREME COURT OF THE UNITED STATES:

Your petitioner, Corona Cord Tire Company, a corporation of Pennsylvania, respectfully prays for a writ of *certiorari* to review the decision of the Circuit Court of Appeals for the Third Circuit in the above entitled cause.

Ground for Petition.

The basis for the prayer for the grant of the writ is that two Circuit Courts of Appeals have announced diametrically opposed views on identically the same issue, *i. e.*, the validity of U. S. Letters Patent No. 1,411,231, presented by records which are practically identical; and as a result two of the great industries of the country, the rubber industry and the chemical industry, have been placed in a state of uncertainty on a matter of great concern in those industries, a state of uncertainty which can be terminated only by a ruling by this Court.

Statement.

In support of its prayer, petitioner submits the following facts:

1. The issue on which there is this conflict of opinion between two Circuit Courts of Appeals is the validity of Letters Patent No. 1,411,231 for a Vulcanization Accelerator, granted March 28, 1922, to Dovan Chemical Corporation, as assignee of Morris L. Weiss (Tr. Vol II, p. 1, Pltf.'s Exh. No. 1).

2. Two suits for infringement of that patent have been brought by its owner, Dovan Chemical Corporation, one of them in the Second Circuit and the other in the Third Circuit. The first suit was brought in New York against National Aniline & Chemical Company, Inc., and the second was brought in Pittsburg against your petitioner, Corona Cord Tire Company, nearly a year after the decision of the Court of Appeals for the Second Circuit.

The opinion of the Circuit Court of Appeals of the Second Circuit in the first suit is reported in 292 Fed. Rep. p. 555. The opinion of the District Court in the second suit is reported in 10 Fed. (2d), at page 598, (Tr. Vol. I, p. 687) and that of the Court of Appeals of the Third Circuit in 16 Fed. (2d) at page 419, (Tr. Vol. II, p. 343). The opinion of the District Court in the first suit is not reported. For the convenience of the Court, all four opinions are printed as an appendix to the brief in support of this petition.

3. In the first suit, the District Court held the patent valid and was reversed on appeal, with one member of the Appellate Court dissenting. In the second suit, the District Court held the patent invalid and was reversed on appeal, again with one member of the Appellate Court dissenting. Thus the eight members of the Federal Bench who have

passed upon the validity of the patent have divided equally in their conclusions, four holding the patent valid and four holding it invalid.

4. The validity of the patent was the only issue presented and passed upon in the two suits, infringement or contributory infringement being conceded if the patent were valid. All of the claims of the patent were in issue in both cases.

5. The records presented to the Courts in the two suits are substantially identical. The depositions of seven witnesses who testified in the first suit were introduced in the second suit by stipulation (Tr. Vol. II, pp. 301-340). Six other witnesses in the first case testified in the second. Included in these six are three men whose testimony is by far the most important in both cases.

6. The fact that the conclusions of the two Courts of Appeals are in direct conflict is stated explicitly in the opinion of the Court of Appeals for the Third Circuit in the case at bar, as follows:

> "In reaching the conclusion we have, we regret to find ourselves at variance with those reached by two Circuit Judges of the Second Circuit, reported at 292 Fed. Rep. 555 heretofore referred to."

7. The issue of validity of the Weiss patent is one of far-reaching industrial importance.

It involves the right to manufacture a substance which has been and is being manufactured and sold to the extent of hundreds of thousands of dollars worth each year by several of the largest chemical manufacturing companies of the country. It involves also the right to use that substance and the substance has been and is being used in enormous quan-

tities by many of the largest rubber manufacturing companies of the country in making innumerable different rubber articles, including automobile tires and tubes.

The defendant in the first suit, National Aniline & Chemical Company, Inc., is a manufacturer of chemicals and was charged with contributory infringement.

The defendant in the second suit, Corona Cord Tire Company, is a manufacturer of rubber tires and was charged with direct infringement.

Thus there are two major industries of the country, the chemical manufacturing industry and the rubber manufacturing industry, which have been brought into a state of uncertainty in a matter of great importance to them by the decision of the Court of Appeals of the Third Circuit, in direct conflict with the prior decision of the Court of Appeals of the Second Circuit. They are and must necessarily be uncertain as to whether or not they have incurred liability, and if so what liability, for their past manufacture, and, more important, they are and must necessarily be uncertain as to whether or not continuation of the use of the substance will involve liability. Most rubber manufacturing is done in the Sixth Circuit, particularly in and around Akron, Ohio, and in that Circuit there has been no litigation involving the Weiss patent. To a large extent, the chemicals used by the rubber industry are manufactured in the Second and Third Circuits. As to any liability of the chemical manufacturing companies for manufacture and sale of the patented substance and liability of the rubber manufacturing companies for use of the substance and sale of articles containing it, the situation now presented is that the Weiss patent is valid in the Third Circuit and invalid in the Second Circuit.

In view of the foregoing, we respectfully pray that the Court issue its writ of *certiorari* to the Circuit Court of Appeals for the Third Circuit, to bring the record of the proceedings in this suit before this Court for its consideration,

and that petitioner be granted such other and further relief as this Court shall deem appropriate.

Respectfully,

CORONA CORD TIRE COMPANY,
By DEAN S. EDMONDS,
FRANK E. BARROWS,
WILLIAM H. DAVIS,
Counsel for Petitioner.

Dated, New York, February 18, 1927.

I hereby certify that I am of counsel for the petitioner herein, Corona Cord Tire Company; that I have prepared the foregoing petition in accordance with the request of said petitioner; that I firmly believe that the allegations contained in said petition are true; and that said petition is not made for purposes of delay but is, in my opinion, well founded in law and in fact and should be granted.

DEAN S. EDMONDS,
Counsel for Petitioner.

Dated, New York, February 18, 1927.

IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, A. D. 1926.

CORONA CORD TIRE COMPANY,
Petitioner,

vs.

DOVAN CHEMICAL CORPORATION,
Respondent.

Notice.

TO THE DOVAN CHEMICAL CORPORATION, OR ITS ATTORNEYS:

PLEASE TAKE NOTICE that upon a certified copy of the transcript of record herein, I shall present the petition for writ of *certiorari* hereunto annexed to the Supreme Court of the United States, at the Capitol, in the City of Washington, District of Columbia, on the 21st day of February, 1927, at the opening of Court on that day, or as soon thereafter as counsel can be heard, and I shall then and there move for such other and further relief in the premises as may be just.

DEAN S. EDMONDS,
Solicitor for Petitioner.

Dated, New York, February 18, 1927.

To:
JULIAN S. WOOSTER, Esq.,
Woolworth Bldg.,
N. Y. City.

DUE SERVICE of the foregoing notice, and of a copy of the petition referred to therein, are hereby admitted this day of February, 1927.

Solicitor for Respondent.

Office Supreme Court,
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IN THE

Supreme Court of the United States.

OCTOBER TERM, A. D. 1926.

No. C[redacted]182

CORONA CORD TIRE COMPANY,

Petitioner,

vs.

DOVAN CHEMICAL CORPORATION,

Respondent.

BRIEF FOR PETITIONER

ON

PETITION FOR WRIT OF CERTIORARI

AND

CONFLICTING OPINIONS OF THE LOWER COURTS.

DEAN S. EDMONDS,
FRANK H. BARROWS,
WILLIAM H. DAVIS,
Counsel for Petitioner.

The Stuyvesant Press Law Printing Office, Inc., 114 Nassau St., New York, N. Y.

BRIEF FOR PETITIONER.

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CASES CITED.

Dovan Chemical Corporation *vs.* National Aniline & Chemical Co. Inc., 292 Fed. 555 ..... 3, 11, 18

Dovan Chemical Corporation *vs.* Corona Cord Tire Company, 10 Fed. 2d 598 and 16 Fed. 2d 419. 3, 26, 37

IN THE

Supreme Court of the United States.

OCTOBER TERM A. D. 1926

CORONA CORD TIRE COMPANY,
Petitioner,

vs.

DOVAN CHEMICAL CORPORATION,
Respondent.

BRIEF FOR PETITIONER IN SUPPORT OF PETITION FOR WRIT OF CERTIORARI.

TO THE HONORABLE, THE CHIEF JUSTICE AND ASSOCIATE JUSTICES OF THE SUPREME COURT OF THE UNITED STATES:

We respectfully urge that the petition for *certiorari* filed herein by Corona Cord Tire Company be granted. The situation presented by the petition we believe to be one of direct and irreconcilable conflict between decisions of two Circuit Courts of Appeals, falling within the class specified in section 5(*b*) of Rule 35 of the revised rules of this Court adopted June 8, 1925, as a class in which the grant of *certiorari* is appropriate.

The decisions of the two Circuit Courts of Appeals are diametrically opposed on identically the same issue raised by the same defenses on practically identical evidence, and it seems impossible that the state of uncertainty and confusion now existing in the rubber manufacturing industry and in the chemical manufacturing industry by reason of these conflicting decisions can be terminated otherwise than by a decision of this Court.

The first of the two suits involving the validity of the Weiss patent was terminated in July, 1923, by the decision of the Circuit Court of Appeals of the Second Circuit holding the patent invalid. Since that time, the chemical and rubber manufacturing industries have proceeded on the assumption that there was no occasion to give the Weiss patent further consideration. In that period of three and one-half years, many of the rubber manufacturing companies, including some of the largest of them, have used the patented accelerator in considerable quantities and the accelerator has been made for and sold to them by the large chemical manufacturing companies of the country. The recent decision of the Circuit Court of Appeals of the Third Circuit sustaining the validity of the Weiss patent, presents the possibility of liability for past manufacture during that period of three and one-half years as well as any future manufacture, and also the question as to whether or not a change should now be made to the use of some other accelerator, a change which would involve considerable expense and unavoidable hazard of the quality of the products during the period of completing the change.

Already the recent decision of the Circuit Court of Appeals of the Third Circuit has had effect in making manufacturers of rubber hesitate to use the accelerator of the Weiss patent and to purchase it from the chemical manufacturers who have supplied them heretofore. Thus it has already become evident that unless this Court shall take cognizance of this suit and settle the status of the Weiss patent for all time and for the whole country, the business of the rubber manufacturers and the chemical manufacturers serving the rubber industry will be affected adversely to a substantial extent by reason of the uncertainty which now exists as a result of the conflicting decisions of Courts of Appeals on the validity of the Weiss patent.

The Two Litigations.

The first suit for infringement of the Weiss patent was brought by the owner of the patent, Dovan Chemical Corporation, against National Aniline & Chemical Company, Inc.

The bill of complaint was filed May 29, 1922, approximately two months after the issuance of the patent. It came on for trial in January, 1923, before Circuit Judge Martin L. Manton, then presiding in the District Court, and shortly thereafter, on January 24, 1923, an opinion was filed authorizing the issue of a decree sustaining the validity of the patent and holding that the defendant had infringed (Not reported. See appendix hereto, page 11).

Thereupon appeal was taken to the United States Circuit Court of Appeals for the Second Circuit. That appeal came on for argument before Circuit Judges Rogers, Hough and Mayer, and on July 19, 1923, an opinion was filed holding the patent invalid in all respects and ordering reversal of the decree of the District Court. (292 Fed. 555 and appendix page 18.) The opinion has a note at the foot thereof reading "Judge Mayer dissents". Thereupon a petition for rehearing was presented to the Court of Appeals and that petition was denied. Immediately thereafter, petition for a writ of *certiorari* was presented to this Court by the plaintiff (the present respondent) and that petition was denied (263 U. S. 714).

The suit in which the present petition for *certiorari* is filed is the second suit. It was brought at Pittsburg in the District Court for the Western District of Pennsylvania on June 4, 1924, nearly a year after the termination of the litigation against the National Aniline Company. In the second suit, the Dovan Chemical Corporation is again the plaintiff and the defendant is Corona Cord Tire Company, of East Butler, Pa. This second suit came on for trial before District Judge Robert M. Gibson on October 7, 1925, and on February 3, 1926, an opinion was filed by Judge Gibson holding the patent invalid in all respects and ordering dismissal

of the complaint (10 Fed. 2d, 598. See also Tr. Vol. I, p. 687, and appendix hereto, page 26).

Thereupon appeal was taken to the United States Circuit Court of Appeals for the Third Circuit. That appeal came on for hearing before Circuit Judges Buffington, Woolley and Davis on October 6, 1926, and on December 7, 1926, an opinion was filed holding the patent to be valid and ordering reversal of the decree of the District Court. (16 Fed. 2d, 419. See also Tr. Vol. II, p. 343 and p. 353 and appendix hereto, page 37.) The opinion of the Court has a note at the foot thereof reading "Woolley, Circuit Judge, dissents". Thereupon a petition for rehearing was presented to the Court of Appeals and that petition was denied.

The Records in the Two Suits.

The records presented to the Courts in the two suits are practically identical. The depositions of seven men who testified in the suit against the National Aniline Company were entered in the record of the suit against the Corona Company by stipulation (Tr. Vol. II, pp. 301-340). Also, six of the witnesses who testified in the National Aniline suit, gave their testimony again at the trial of the suit against the Corona Company; included in those six are three witnesses whose testimony was considered by the Courts and by counsel as the most important elements of the two records, namely, the patentee Weiss and his corroborating witness Daniels, for plaintiff, and the alleged prior inventor and prior user, Dr. Kratz, for defendant. Also, many of the documents admitted in evidence as exhibits in the first case were also exhibits in the second, among them being the documents which were considered by the Courts and by counsel as being the most important of all.

In each of the two suits the commission by the defendant of the acts complained of as infringement or contributory infringement was admitted, and no argument of non-infringement was presented by either defendant.

Conflict of the Decisions.

Thus, of the two District Courts which passed upon the validity of the patent, one held it valid and the other held it invalid. The same is true of the two Courts of Appeals, and the decisions of the two Courts of Appeals do not represent the unanimous view of the Judges who heard the appeals as in each instance one Circuit Judge dissented. Of the eight Judges who have passed upon the validity of the patent, four have held it valid and four have held it invalid.

The direct conflict of the decisions of the Courts of Appeals of the Second and Third Circuits is clear, both as to the primary issue of validity or invalidity of the Weiss patent and also as to various subsidiary issues controlling the decision on the primary issue. The opinion of the Court of Appeals for the Third Circuit in this *Corona* case states the fact of direct conflict explicitly. The opinion ends with the following:

> "In reaching the conclusion we have, we regret to find ourselves at variance with those reached by two Circuit Judges of the Second Circuit reported at 292 Fed. Rep. 555 heretofore referred to."

One of the subsidiary issues above referred to is the defense of prior knowledge which was urged in both suits. In the *National* suit, the Court of Appeals of the Second Circuit held specifically that prior to the earliest date of invention claimed for Weiss, the superior activity of the patented accelerator was known to Dr. Kratz and his associates. The Court said (292 Fed. Rep. 559):

> "But if we are wrong about this" (that Weiss's work prior to a certain publication was "merely experimental and guided by no principle") "and if making small experimental slabs of rubber or shoddy with DPG as the accelerator constituted embodiments of Weiss's disclosure, then we find, on what we regard as the clearest evidence, that Dr. Kratz did the same thing in 1916."

The Court also said a little further along in its opinion:

> "It follows that, taking this patent at the patentee's own value, and accepting, for purposes of decision only, his view of what he invented and how he embodied that invention, Dr. Kratz and associates were ahead of him in every step."

The Court of Appeals of the Third Circuit in passing on the *Corona* case included in its opinion no detailed statement of reasons why it differed from the Court of Appeals of the Second Circuit on this defense of prior knowledge, but its general discussion makes it manifest that it took a directly opposite view from that expressed in the foregoing quotation.

Another of the subsidiary issues referred to is the defense of prior use which was also urged in both suits. The proof of the alleged prior use rests largely in the testimony of a single individual (Tr. Vol. I, p. 337 *et seq.*), though his testimony is corroborated by related facts and by documents, the latter including a formula written by the witness in a laboratory note-book kept by him in the regular course of his work (Tr. Vol. II, p. 250). This defense of prior use was sustained by the Court of Appeals of the Second Circuit in the *National* case. The Court recognized the limitations of the corroboration, but was of the opinion that a prior use is proved if the evidence submitted makes the Court feel certain that the use occurred as alleged. The Court said (292 Fed. Rep. 559):

> "Further, when we perceive how closely his acts in 1916 correspond with his essay of 1919, we believe his evidence, though uncorroborated, that in 1917 he made rubber tires and sold them using DPG as the accelerator; and this is more than Weiss even claims to have done before application filed."

On this point also the opinion of the Court of Appeals of the Third Circuit in this *Corona* case includes no statement in detail of reasons for rejecting this defense of prior use, but the opinion makes it plain that the defense was rejected.

A third subsidiary issue involved the date of invention proven by the patentee. The opinions of the two Courts of Appeals are specific in the statement of the conclusions reached, and in those conclusions the two Courts are directly opposed. The Court of Appeals of the Second Circuit in the *National* case said that any work which the patentee may have done prior to a certain publication of the patented invention was inconclusive and produced nothing of value. The Court said (292 Fed. 559):

> "But, for purposes of decision, we accept all his evidence of prior efforts, experiments, or reductions to practice, and will assume that as early as the autumn of 1918 he had not only experimented with DPG as an accelerator, but produced vulcanized rubber with its use. This is a larger assumption than plaintiff can demand on the evidence; yet it cannot avail.
>
> "We do not believe that any one regarded DPG as a seriously preferable accelerator until after the Kratz paper, because that chemist was plainly on this record the first to give comparative figures demonstrating the great saving of time following the use of DPG. He gave definite and persuasive reasons for the preference. We therefore incline to regard all the pre-Kratz work as merely experimental, and guided by no principle. Kratz gave the crucial information as to time saving."

The direct contrary of this is stated to be the conclusion of the Court of Appeals of the Third Circuit in this *Corona* case. The critical date, that of the publication, was September, 1919, and the Court held that prior to that date the patentee had demonstrated the value of the patented accelerator to such a complete extent as to warrant the Court in holding that he had completed the act of invention then. The Court said:

> "Under date of February 21, 1919, another successful test, this time with a shoddy compound, was entered in the same book and another with shoddy on March 4, 1919. These experiments proved the workable worth of DPG as an acclerator in vulcanizing rubber."

Another respect in which the views of the two Courts of Appeals are directly opposed on a matter which had a material effect in leading to the opposed conclusions reached by them, concerns the effect to be given to another patent taken out by this same man Weiss and also owned by the plaintiff (Tr. Vol. II, pp. 297-8). That other patent, which is *not* in suit, discloses and claims a chemical process for the manufacture of the accelerator described and claimed in the patent which *is* in suit. On the question of the bearing of that other patent covering a process for *making* the accelerator on the validity of the patent in suit covering the *use* of that substance as an accelerator however the substance be made, the two Courts of Appeals held directly opposite views. The Court of Appeals of the Second Circuit said, in the *National* case (292 Fed. Rep. 558):

> "The claims in suit would be just as good or bad as they are now, if DPG were worth as much as radium; and if neither Weiss nor anyone else were able to furnish the chemical except in laboratory quantities and by laboratory methods."

On the other hand, the Court of Appeals of the Third Circuit in this *Corona* case referred repeatedly to the other Weiss patent not in suit as showing some great accomplishment by Weiss warranting sustaining the patent which is in suit. For instance, the Court said that if Weiss

> "showed the world in addition how to make this product in commercial quantity in the rubber vulcanizing art, it would seem to us, and we so hold, that a claim, such for example as his eighth" (which was quoted) "was inventive in character and valid."

Conclusion.

From the foregoing, it must be evident that there is direct and irreconcilable conflict between the decisions of the two Circuit Courts of Appeals, as to the primary issue of validity or invalidity and also as to the specific defenses of prior knowledge, prior use and prior publication.

The practical effect of this conflict of decision will inevitably be, and in fact has already been, to create a condition of uncertainty and confusion in the rubber manufacturing industry and in that part of the chemical manufacturing industry which serves the rubber manufacturers. The men directing those industries are at a loss to know how to guide their business course. They have to face the condition that the Weiss patent is valid in the Third Circuit and is invalid in the Second Circuit. Most rubber manufacturing is carried on in the Sixth Circuit, centering around Akron, Ohio, and in that Circuit there has been no litigation involving the patent. But the rubber products of the enormous Akron factories are sold all over the country and enjoining the sale of rubber articles made at Akron may be attempted in the Third Circuit at any time. That is one of the elements of the uncertainty in which the rubber manufacturing industry finds itself. Another is the possible liability for past manufacture. Another is whether or not it is advisable to effect a change of factory practice to use of some other accelerator, a change which is difficult, expensive, time-consuming and hazardous. Another of the elements of uncertainty is whether or not to purchase the patented accelerator from the patent owners, paying for it the higher price which is the inevitable concomitant of a restricted source of supply. Also, the chemical manufacturers are in a similar state of uncertainty as to their liability, past and future, and as to their ability to hold, and the desirability of holding, the trade of the rubber manufacturers to whom they have been supplying accelerators up to the present time.

It seems clear, therefore, that a situation has been produced by these conflicting decisions of Courts of Appeals which should not continue and which can be brought to an end only by the decision of this Court.

Respectfully submitted,

DEAN S. EDMONDS,
FRANK E. BARROWS,
WILLIAM H. DAVIS,
Counsel for Petitioner.

Dated February 18, 1927.

Appendix

OPINIONS OF THE COURTS

OF THE

SECOND AND THIRD CIRCUITS

ON THE

VALIDITY OF WEISS PATENT No. 1411231.

UNITED STATES DISTRICT COURT,

FOR THE SOUTHERN DISTRICT OF NEW YORK.

DOVAN CHEMICAL COMPANY,
Plaintiff,

AGAINST

NATIONAL ANILINE & CHEMICAL CO., INC.,
Defendant.

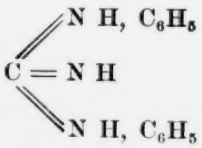
DRURY W. COOPER, Esq., EDWARD W. VAIL, Esq.,
Of Counsel for Plaintiff.

DEAN S. EDMONDS, Esq., FRANK E. BARROWS, Esq.,
Of Counsel for Defendant.

Opinion of Circuit Judge Manton.

The patent in suit, No. 1,411,231, was applied for November 12, 1921 and granted March 28, 1922, and is for vulcanization accelerators. It is a process for improving rubber compounds so that the finished product shall be of superior quality and so that the time required for vulcanization shall be greatly reduced over that ordinarily required for such purposes. In the art, when certain organic substances was added to rubber mix during the compounding, a catalytic or similar action is produced which causes the rubber or gum to unite or react more rapidly or thoroughly with sulphur or other vulcanizing agents. The inventor discloses that

diphenylguanidine is particularly effective for this purpose. The formula indicated is given as



Recognizing that di-substituted guanidine produced by laboratory methods had been known to chemists for years, to be used in accelerators of this type, it was thought that di-substituted guanidine was not known to be efficacious or useful as accelerators in vulcanizing, nor could it be produced in sufficiently large quantities in a substantially pure form or at a sufficiently low price to be available for this purpose, and the inventor says that the use of diphenylguanidine had been unknown prior to his researches and that he found it much more powerful and effective as an accelerator in vulcanization than triphenylguanidine. The diphenylguanidine not only hastens the vulcanization but results in a final product much superior in texture, durability and aging qualities over that when triphenylguanidine is used. A greatly improved product results, particularly as regards elasticity, aging qualities and a freedom from bloom. The method of carrying out the invention is illustrated as follows: the rubber may be compounded in proportions of 50 parts by weight of new rubber, 45.5 parts by weight of zinc oxide, 3.5 parts by weight of sulphur, 1 part by weight of diphenylguanidine. They are mixed together in a suitable way, such as by milling and then vulcanized or cured in molds under heat corresponding to steam pressure of about forty pounds per square inch. This vulcanizing temperature is continued until the compound is suitably vulcanized, which requires from ten to twenty minutes, depending upon the shape and size of the article being vulcanized. This accelerator is useful and valuable where it is desired to produce a harder or less elastic portion in an article leaving other parts which

are required to be more elastic and flexible, such as automobile tires. Indeed, this accelerator has been so successful that a large demand has been built up and a market created for it, and several of the large chemical corporations are manufacturing it. The purchasing public shows a willingness to pay for it. This is a practical illustration of its substantial value. Again, the defendant is using the process, and it too has built up a large and profitable business.

It is urged by the defendant that three others, prior to Weiss, tested diphenylguanidine as an accelerator. One George D. Kratz read a paper in September, 1919, at a meeting of the Chemical Society of Philadelphia in which diphenylguanidine was referred to as an accelerator. He, called as a witness, testified that he incorporated some twenty to thirty grams of diphenylguanidine in some tire tube stock which was sold to the Rubber City Clearing House at Akron, Ohio, in 1917. In his paper, Mr. Kratz, said, speaking of his work: "We have chosen to employ only substances which have previously been cited by others and whose definite chemical composition permits comparisons with homologs or other closely related compounds." And he says that "the activities of the substances from a practical standpoint were considered of secondary importance". A mere reading of the paper before this Society is not a statutory publication under Sec. 4886 of the Revised Statutes. There was a publication in the Chemical and Metallurgical Engineering on October 1, 1919. What was printed there does not disclose the invention or give it into the possession of the public fully, so that it might be practically and publicly employed. There was a complete publication by Kratz and others in the Journal of Industrial & Engineering Chemistry for April, 1920, and the application for the patent in suit was filed November 12, 1921. This publication was less than two years prior to the filing of the first Weiss application which was on July 22, 1921. That paper refers to diphenylguanidine as being an accelerator, but it was Weiss who was the first one to adequately test, by actual experience and to overcome the prac-

tical difficulties there were in the way of the accomplishment. Weiss was employed by the Republic Rubber Company of Youngstown, Ohio, in the Fall of 1917, and was under the supervision of the chief chemist Daniels. Up to March 8, 1918, Weiss was associated with one Carlton, who went with the Republic Company in June, 1917, about four months prior to Weiss' engagement. Carlton says that he had frequent conversations with Weiss with regard to accelerators, and that he pointed out to him many organic compounds suggesting that they be tried. It was impossible to try them except those which were easily obtainable on the market or very easily prepared, and Weiss referred him to "Richter's Organic Chemistry" and suggested after reading from that, that diphenylguanidine might be an accelerator. It was after this that Weiss went to Pittsburgh to the Carnegie Library to obtain further information on the subject of guanidines from the literature there available. He made this investigation the first week of January, 1919, under Mr. Daniels' direction. Daniels then become interested in developing diphenylguanidine as an accelerator and said that in the Fall of 1918 "I knew he had some results that looked pretty good." After returning from Pittsburgh, some tests on rubber compound were made, the result of which was shown under date of February 10, 1919 and after that another test was made on the shoddy compound under date of March 21, 1919. Another test was made March 4, 1919, and still there was another under date of September 29, 1919, and again October 12, 1919, in which diphenylguanidine prepared by the new process Mr. Weiss introduced. In the Fall of 1919, Weiss supplied Mr. Daniels with diphenylguanidine for his personal use. The X-book record of the Republic Company shows various tests made by Weiss. It demonstrates extensive work by him experimenting to ascertain the value of diphenylguanidine as an accelerator in various compounds adapted for practical use. The first test slabs were shown to Mr. Daniels at the time of Weiss' Pittsburgh visit. These slabs were made in December, 1918. The Weiss tests re-

corded in the Spring of 1918, were before the reading of the Kratz paper, and demonstrate that Weiss had been working on the production of diphenylguanidine in commercial quantities. He left the Republic Company on March 15, 1920. Thereafter, he visited rubber companies and at their places talked on this subject and exhibited slabs of rubber that had been cured with the use of diphenylguanidine. He then returned to New York, being unsuccessful in obtaining a position with the various rubber companies, visited the offices of the defendant and made application for employment, but did not succeed. He later visited the States Metals Company (afterwards the selling agent for the plaintiff herein) and interested officers of the plaintiff company. In May, 1920, after the organization of the plaintiff company, a plant was built in Brooklyn, New York, where diphenylguanidine was manufactured for commercial use.

The X-book referred to proved to have page 2005 torn out. This was subsequently found. This records in the first column a test of the use of diphenylguanidine and is said to have been made by Baldwin. The rest of the entries were made by Weiss. That column was under date of February 23, 1917, whereas all the other entries (none record the use of diphenylguanidine) were made in the year 1918. I am not satisfied that there was such an entry of an experiment as is indicated in column 1 at the time Weiss entered his record regarding the use of diphenylguanidine. It is not shown where Baldwin obtained diphenylguanidine to experiment with. Baldwin's testimony as to this experiment is unsatisfactory and I decline to accept it.

Kratz is said to have disclosed his idea to others in 1916. It is said that then he experimented and reached definite conclusions as to diphenylguanidine while working for the Norwalk Rubber Company and that what he did at the Norwalk Company constituted a reduction to practice as also the occasion of making the tubes for the Falls Rubber Company in 1917. He says, speaking of his work at Norwalk under date of November 1, 1916 (report from Norwalk plant,

Exhibit E), that it gives the relative accelerating values of certain substances tested. But what he did appears to have been a laboratory experiment which was abandoned because nothing further was then done until the later effort at reduction when employed by the Falls Rubber Company where the tubes were manufactured as above referred to. There thirty grams of diphenylguanidine were mixed with rubber stock made into inner tubes for automobiles and such tubes were sold as blemished rubber in Akron, Ohio. No further commercial use was made. The amount of acceleration used could have had no substantial effect in curing of the rubber as compared with that used in plaintiff's process. The burden of proof is upon the defendant to establish the defense of prior public use. When the application was in the patent office, the Kratz paper was referred to, as were his experiments, and a hearing was had there. I think the issuance of the letters patent carried with it the presumption of validity and, in view of the defense offered here, should be established beyond every reasonable doubt. (*Coffin* vs. *Ogden*, 18 Wall. 120):

> "The prophetical suggestions in English patents of what can be done, when no one has ever tested by actual and hard experience and under the stress of competition the truth of these suggestions, or the practical difficulties in the way of their accomplishment, or even whether the suggestions are feasible, do not carry conviction of the truth of these frequent and vague statements." (*Westinghouse Air-Brake Co.* vs. *Great Northern Ry. Co.*, 88 Fed. at 263.)

Mere vague and general representations will not support such a defense as the knowledge supposed to be derived from the publication must be sufficient to enable those skilled in the art or science to understand the nature and operation of the invention and to carry it into practical use. Whatever may be the particular circumstances into which the publication takes place his account published, to be and in effect to support such a defense, must be an account of a complete

and operative invention capable of being put into practical operation. (*Seymour* vs. *Osborne*, 11 Wall. 516.)

I am satisfied that the use of diphenylguanidine as in the plaintiff's process, involved invention. Using it advanced the art of rubber making. Its utility and the consequences which followed, fully support the real practical test of the sufficiency of an invention. Where the utility is proved to exist in any degree, a sufficiency of invention to support the patent must be presumed. (*Smith* vs. *Goodyear*, 93 U. S. 486.) This substitution involved a new process of manufacture to develop a new use of the properties of diphenylguanidine and there was a new and useful result obtained. (See *Smith* vs. *Goodyear*, *supra*; *Rumford Chemical Works* vs. *N. Y. Baking Powder Co.*, 134 Fed. 385; *Genl. El. Co.* vs. *Hoskins Mfg. Co.*, 224 Fed. 464.) A complete and successful invention should not be voided by proof of a number of incomplete and imperfect experiments made by others at an earlier date. Even though the experimenters may have had the idea of the invention and may have made partially successful efforts to embody it in a practical form, there is not sufficient to defeat an issued patent. This applies in cases arising under patents for chemical products. (*Amer. Wood Paper Co.* vs. *Fibre Disintegrating Co.*, 23 Wall. 566.) An invention to be patentable should be complete and capable of producing the result and one who has been successful in his efforts should not be deprived of the consequences of that success merely because someone came near it theretofore. (*Diamond Patent Co.* vs. *Carr Co.*, 217 Fed. 400.)

I think Weiss is the discoverer of the process which has borne such good results that the plaintiff as assignee should be accorded the benefits thereof.

Decree for plaintiff.

Dated: January 24, 1923.

MANTON,
United States Judge.

UNITED STATES CIRCUIT COURT OF APPEALS

FOR THE SECOND CIRCUIT.

Before:

Hon. HENRY WADE ROGERS,
Hon. CHARLES M. HOUGH,
Hon. JULIUS M. MAYER,
Circuit Judges.

DOVAN CHEMICAL CORPORATION,
Plaintiff-appellee,

vs.

NATIONAL ANILINE & CHEMICAL COMPANY, INC.,
Defendant-appellant.

Appeal from decree in Equity entered in the District Court for the Southern District of New York.

Suit is on all the twelve claims of Patent No. 1,411,231, granted March 28, 1922, to plaintiff, as assignee,—on the application of Weiss filed November 12, 1921.

On July 2, 1921, Weiss filed an earlier application, for a "Process of Making Diphenylguanidine",—a chemical around which this litigation revolves, and which is called in the record D. P. G.;—an abbreviation that will be used in this opinion. This application also ripened into a patent; No. 1,422,506, on July 11, 1922; but the present suit is not brought thereupon. Its existence and nature, however, have an important bearing on the case at bar. This earlier application was also assigned to plaintiff before issue.

D. P. G. is a substance long known to chemists, but produced, before Weiss invented his above referred to process,—only with difficulty and expense. It was a laboratory and not a commercial product. This is the assertion of the application of July, 1921, and may be assumed as true for purposes of discussion. Thus, by the date just given at the latest, Weiss conceived that he knew how to produce D. P. G. in quantity and under commercial conditions.

The application for the patent in suit is labelled as one for a "Vulcanization Accelerator", and its asserted object is "to improve rubber compounds" in two particulars, 1st by imparting to "the finished product, * * * superior quality", and 2nd, by reducing "the time required for vulcanization". The first asserted excellence, need not be discussed; for present purposes it is unimportant if not immaterial; the second is admitted, in a certain sense, viz: that D. P. G. is an "accelerator" of merit, its acceleration is more active than that of most if not of all the substances previously used, its adoption is very recent, and no commercial or manufacturing use is known for it except in vulcanization.

An "accelerator" is any substance organic or inorganic which when mixed in due proportion with the mass prepared for vulcanization, hastens that process by a chemical action generally described as catalytic. D. P. G. is but one member of what the testifying chemists call the guanidine group, which includes T (tri) P. G. and M (mono) P. G.; and T. P. G. was a known and commonly used accelerator for some years before Weiss.

In this state of affairs, Weiss said in his application for the patent in suit:

> "I am aware that T. P. G. has been suggested, and probably used to some extent, as an accelerator in the vulcanization of rubber, but the use of D. P. G. for that purpose appears to have been unknown prior to my researches on this substance."

He then proceeds further to assert that he had discovered "di-substituted guanidines", though "particular D. P. G.",

to be effective accelerators; but the disclosure does not reveal any reason for this summary extension of efficiency and invention to a class of which D. P. G. is but a member. Finally the specification defines D. P. G. by formula, and gives the ingredient proportions of the mass for vulcanization; but neither particular is new.

The foregoing is the sum of disclosure; and on it Weiss founded claims (allowed as propounded) for both process and product; so drawn as to cover not only the use of D. P. G., but of any di-substituted guanidine. This scheme of invention-definition, is illustrated by claims one and twelve, which are as follows:

> (1) The process of treating rubber or similar materials, which comprises combining with the rubber compound a di-substituted guanidine.
>
> (12) A vulcanized compound of rubber or similar material combined with a vulcanizing agent and D. P. G.

Plaintiff as assignee was thus armed with one patent for a special method of producing D. P. G., and another which in effect covered the use, in rubber vulcanization,—of a family or group of guanidines including D. P. G. however produced.

Defendant has made D. P. G., and sold it to persons who in all probability would use all or most of it in vulcanizing rubber; and especially in preparing tires for motor-cars,—this being the commercial demand of the day stimulative of inventions such as the one at bar. But, so far as this record shows, defendant's D. P. G. does not infringe Weiss' process for making that chemical; therefore defendant is sued herein as a contributory infringer of No. 1,411,231, which is described in the bill as covering an "improvement in vulcanization accelerators and in the process of treating rubber, and in the vulcanized rubber compound in which said accelerator is used."

Plaintiff prevailed below, and defendant was by decree declared to have "contributed to the infringement (of the patent in suit) by manufacturing, selling and causing to be used D. P. G. as an accelerator in the vulcanization of articles made of rubber." Decree awarded to plaintiff "the profits, gains and advantages" derived from such infringement, with the usual injunction. Whereupon defendant appealed. Further references to the evidence will be made in our opinion.

DEAN S. EDMONDS and FRANK E. BARROWS for defendant-appellant;

DRURY W. COOPER, JAMES R. SHEFFIELD and EDWARD W. VAILL, for plaintiff-appellee.

HOUGH, *C. J.*

There are several matters, raised by the pleadings and treated in argument, that we shall lay aside at once, as not necessary for decision; however interesting in themselves or important in other cases.

Thus we express no opinion as to whether,—considering the long existing knowledge of D. P. G., and the pre-existing actual commercial use of T. P. G. for acceleration,—it constituted patentable invention in Weiss to muster in the former chemical as an accelerator.

For the same reason we shall not consider the argument that such of the claims in suit as seek to monopolize all disubstituted guanidines (Nos. 1, 5 and 9) cannot be valid if taken literally.

Nor is it necessary to decide whether there was error in awarding against a contributory infringer, under the circumstances shown,—recovery of profits;—as distinct from damages.

What must be decided are certain questions of fact, and the answers we shall give will dispose of the whole litigation. These questions may be thus framed:—(1) What did

Weiss invent according to his own statements, and that word includes not only what he swore to in his specification, but what he similarly affirmed in affidavits and on the witness stand. (2) When did he make the invention in question? On the answers to these queries will depend our finding as to the duly pleaded defense that "prior to the alleged invention (by Weiss) the same and every material part thereof were (if there be any patentable invention therein) invented by" other persons named;—or one or some of them.

What Weiss invented, he tells in his specification thus,—"I have found that D. P. G. is much more powerful and efficacious as an eccelerator in vulcanization than T. P. G."; and nothing in plaintiff's evidence enlarges, improves or contradicts this simple statement. The claims too, when the increment of using the phrase "di-substituted guanidines" instead of D. P. G. is disregarded, mean substantially just what Weiss swore to; and the whole application might be condensed into one sentence,—"I claim the use of D. P. G. as an accelerator, because I was the first person who observed its efficacy for that purpose."

We are assuming that what might be called a "patent of observation" is good in law, and good when wholly disassociated from any method of producing that of which the beneficial use is observed. And this leads us to point out here, how Weiss' earlier application for "A process of making D. P. G.," clouds the present issue.

The claims in suit would be just as good or bad as they are now, if D. P. G. were worth as much as radium; and if neither Weiss nor anyone else were able to furnish the chemical except in laboratory quantities and by laboratory methods. Of course, in such case, this litigation would never have arisen, and the patent at bar would probably never have been sought, because in a practical sense it is but a pendant or "clincher" to the process patent; yet in legal theory the patentable invention here displayed would be just as good or bad as it would be if it had no more relation to the com-

mercial or practical arts than had the "Edison Effect" when it was granted patent protection more than a generation ago.

In making the foregoing summary of invention, we agree with the patent Examiner who remarked that Weiss' application was "no more than a broad disclosure of the use of (D. P. G.) without disclosing any details other than those usually employed with accelerators of this class."

Assuming now invention in this "broad disclosure", and proceeding to the query as to when Weiss invented,—the date September 2d-6th, 1919, is important. On those days the American Chemical Society met in Philadelphia, the meeting was largely attended by chemists, Weiss did not go, but his superior officer (practically his employer) did. At that meeting Dr. Kratz read an essay prepared by himself and his assistants on "The action of certain Organic Accelerators in the Vulcanization of Rubber." We hold that essay to be a complete disclosure of everything in the application for the patent in suit, and of a great deal more useful and accurately stated information.

The Kratz essay was subsequently published, but only within less than two years of Weiss' filing date. Appellee seems to complain that defendant treats this spoken essay as a publication under R. S. 4886. We perceive no such contention, it would of course be untenable; but the assertion is made, and we agree with it that Dr. Kratz invented whatever Weiss did before the latter had any concept of invention; therefore Weiss was not the "first, sole, true and original inventor", as the bill asserts.

The quotation above made from the file-wrapper contents, is part of what the Examiner said, when he confronted Weiss' solicitors with the publication of Kratz's essay. Their reply was not to call attention to the date of publication and rely on R. S. 4886; there was obvious recognition of the truth of the Examiner's criticism, and Weiss fell to affidavit making, (under Office Rule 75), and carrying back his date of invention, so as to antedate Kratz's reading of his essay.

The reason and the only reason for this, is that Kratz by that essay proclaimed himself and his associates as having observed that D. P. G. was a better accelerator than T. P. G. *inter alia;* and this, as we have pointed out, and as the Examiner in substance said, was and is the sum total of this invention.

Dr. Kratz was naturally not heard from in the Patent Office, and the patent was carried through by these affidavits. The same method was used at trial, but Dr. Kratz and his associates and records were there. We have carefully studied that evidence and Weiss' testimony which is not wholly reconcilable with some of the affidavits used in the office.

It is proven by plaintiff's witnesses that Weiss' superior came back from Philadelphia and listening to Kratz's essay, and told Weiss and others that he was convinced that "D. P. G. had a good deal on T. P. G.", and gave orders to Weiss to experiment with the now preferred chemical. There is no doubt that the patentee was thus spurred on by Kratz. But, for purposes of decision, we accept all his evidence of prior efforts, experiments or reductions to practice, and will assume that as early as the autumn of 1918, he had not only experimented with D. P. G. as an accelerator, but produced vulcanized rubber with its use. This is a larger assumption than plaintiff can demand on the evidence; yet it cannot avail.

We do not believe that anyone regarded D. P. G. as a seriously preferable accelerator, until, after the Kratz paper, because that chemist was plainly on this record the first to give comparative figures demonstrating the great saving of time following the use of D. P. G. He gave definite and persuasive reasons for the preference. We therefore incline to regard all the pre-Kratz work as merely experimental, and guided by no principle, Kratz gave the crucial information as to time saving.

But if we are wrong about this, and if making small experimental slabs of rubber or shoddy with D. P. G. as the accelerator constituted embodiments of Weiss' disclosure, then we find on what we regard as the clearest evidence that Dr. Kratz did the same thing in 1916. Further when we perceive how closely his acts in 1916 correspond with his essay of 1919, we believe his evidence, though uncorroborated, that in 1917 he made rubber tires and sold them, using D. P. G. as the accelerator; and this is more than Weiss even claims to have done before application filed.

It follows that taking this patent at the patentee's own value, and accepting for purposes of decision only, his view of what he invented and how he embodied that invention, Dr. Kratz and associates were ahead of him in every step. Therefore on this record they were the inventors (if any patentable invention exists) and not Weiss.

Decree reversed with costs, and cause remanded with directions to dismiss the bill with costs.

JUDGE MAYER DISSENTS.

IN THE

DISTRICT COURT OF THE UNITED STATES

FOR THE WESTERN DISTRICT OF PENNSYLVANIA

DOVAN CHEMICAL CORPORATION, Plaintiff, vs. CORONA CORD TIRE COMPANY, Defendant.	In Equity No. 1109

BYRNES, STEBBINS & PARMELEE, Solicitors for Plaintiff, JULIAN S. WOOSTER and JAMES J. KENNEDY, Counsel.

WINTER, BROWN & CRITCHLOW, Solicitors for Defendant, DEAN S. EDMONDS, FRANK E. BARROWS, RAYMOND F. ADAMS and FREDERICK W. WINTER, Counsel.

Opinion.

GIBSON, *District Judge.*

The plaintiff, DOVAN CHEMICAL CORPORATION, assignee of Morris L. Weiss, has brought its action against the defendant, CORONA CORD TIRE COMPANY, for alleged infringement of Weiss Patent No. 1,411,231 for a vulcanization accelerator. The application was filed November 12, 1921, and the patent was granted March 28, 1922. The plaintiff prays the ordinary injunction, the delivery to the plaintiff or destruction of di-substituted guanidines (and particularly diphenylguanidine) which defendant may have, and an accounting.

Crude rubber, as such, is of little value. When mixed with sulphur and other materials, and subjected to heat, it

becomes the rubber of commerce. This mixture and application of heat is termed vulcanization, and a "vulcanization accelerator" is a material added to the mixture which not only hastens vulcanization (as its name indicates), but also increases the elasticity and otherwise improves the quality of the rubber article being manufactured. By the patent in suit monopoly in the use of diphenylguanidine and di-substituted guanidines, as such accelerators, is claimed.

The defendant, by stipulation, has admitted the purchase of diphenylguanidine, and use of it in the proportion of two-thirds of 1% of the rubber as an accelerator of vulcanization, but has denied the validity of the patent. It alleges that one Dr. G. D. Kratz, on September 6, 1919, more than two years before the application for the patent in suit, disclosed the subject-matter of the patent in a paper read at a convention of chemists engaged in the rubber industry held at Philadelphia, which paper was printed in the JOURNAL OF INDUSTRIAL AND ENGINEERING CHEMISTRY in April, 1920, and that thus the full information of the patent was anticipated. It further declares that Kratz was the discoverer of diphenylguanidine as a vulcanizer accelerator, not Weiss; that tubes made in 1917 by Kratz from a rubber mixture, with that accelerator, were sold; that Weiss was not an originator of the idea of the use of diphenylguanidine as an accelerator, having obtained it from one Baldwin, who had experimented therewith; and finally, that the patent does not disclose a patentable invention.

Plaintiff has particularly relied upon Claims 5, 8, 9 and 12 of the patent, which follow:

> "5. The process of treating rubber or similar materials which comprises combining with the rubber compound a vulcanizing agent and a di-substituted guanidine accelerator."
>
> * * * * * *
>
> "8. The process of treating rubber or similar materials, which comprises combining with the rubber compound a vulcanizing agent and diphenylguanidine."
>
> * * * * * *

"9. A vulcanizing compound of rubber or similar material combined with a vulcanizing agent and a di-substituted guanidine."

* * * * * *

"12. A vulcanized compound of rubber or similar material combined with a vulcanizing agent and diphenylguanidine."

In view of the stipulated use of diphenylguanidine by the defendant, our inquiry in the instant matter is properly confined to a determination of the validity or invalidity of the 8th and 12th claims.

In discussing them, monophenylguanidine will be abbreviated to MPG, diphenylguanidine to DPG and triphenylguanidine to TPG.

It has been argued by counsel for defendant—and with considerable force—that, no matter who introduced the use of DPG as an accelerator, no patent for such use was an actual invention, or displayed the inventive faculty, when application was made as late as November 12, 1921. The contention is, in substance, that for at least six years prior thereto rubber chemists had accepted the fact that vulcanization accelerators were nitrogen-containing substances capable of certain reactions in the presence of sulphur. Among the substances known to meet the general chemical requirements of accelerators in this respect were the guanidines, which included MPG, DPG and TPG. TPG was known to be an accelerator, and was in use as such before the patentee, Morris L. Weiss, began his career as a rubber chemist; and prior to its use the possibility of the guanidines, as accelerators had been suggested in magazine articles. DPG is closely related to TPG in chemical construction, and when it was established that the latter was an accelerator of value, it followed as a matter of natural presumption that DPG was also an accelerator. To determine the correctness of this presumption, and the value of the substance, and the best way to use it, the rubber chemist was required, it is claimed, to exercise no inventive faculty, but mere industry in making tests and the ordinary knowledge of his profession. With

the knowledge of the fact that one member of a closely related group was an accelerator, the qualities of another member offered no greater problem to the chemist, except in time of solution, than would be offered to a pipe-fitter altering the plumbing in a building. Each would be required to use only the ordinary tools of his trade, the one his ability to prepare and treat a rubber composition, the other his wrench and mechanical ability.

While the contention, just stated, might require careful consideration under some circumstances, we have not based our decision upon it, but have come to the conclusion upon other grounds that the patent in suit is invalid. The testimony, in our judgment, conclusively establishes the fact that Morris L. Weiss was not the inventor or discoverer of the efficacy of DPG as a vulcanization accelerator—the only actual disclosure of the patent.

It is manifestly impossible that a synopsis of the testimony be here given. Certain admitted facts, as well as disputed testimony, tend strongly to sustain the finding. Morris L. Weiss, having just received a degree in Chemistry from Cooper Union, of New York City, late in 1917, entered the employ of The Republic Rubber Company, of Youngstown, Ohio. That company was engaged in the manufacture of rubber articles largely made from "shoddy", or reclaimed rubber. Like most other rubber manufacturers, in 1918-9 it was interested in obtaining other and improved accelerators, but was specially interested in TPG, and was engaged in building a plant for its commercial use. Weiss, in addition to his usual work, was engaged in experiments upon accelerators, among them TPG. He was required by the rules of the Company to enter all his experiments in a book, called the "X Book" kept for the purpose. During the term of Weiss' employment, prior to September 7, 1919, this X Book shows two experiments with DPG as an accelerator, which are undisputed, and a third which shows a change of its original date and which defendant claims was subsequent to that date. The undisputed tests were with a "shoddy" mixture,

and show no marked superiority of DPG over TPG. The disputed test was not with the shoddy stock of the company, and showed a considerable and marked superiority. On September 6, 1919, one Dr. G. D. Kratz, with a chemistry degree from Cornell University, read a paper upon accelerators before the American Chemical Society at Philadelphia. In it he fully disclosed the subject-matter of the Weiss patent, more fully, indeed, than does the patent. *Inter alia*, he placed a table upon a blackboard, giving the comparative powers of DPG, TPG and other accelerators, aniline being the basis of the comparison. The immediate superior of Weiss in the Republic Rubber Company, M. H. Daniels, was present when this paper was read and copied the tables placed upon the blackboard; and this information was imparted to Weiss upon the following day. After this date the "X Book" shows the use of DPG in a number of tests. In March, 1920, Weiss was discharged by the Republic Rubber Company, and very shortly thereafter applied for employment to two other rubber manufacturers. In both his written applications he referred to the paper read by Dr. Kratz as showing the value of DPG as an accelerator, and stated that he had devised a method of manufacturing that substance cheaply; but in neither did he claim to have been the original discoverer of it as an accelerator. Later in 1920, Weiss with others organized the plaintiff company. On July 2, 1921, Weiss made application for a patent to cover his method of preparation of DPG, and received it on July 11, 1922. As stated, the application for the present patent was filed November 12, 1921, and the patent issued March 28, 1922. The patent examiner cited Dr. Kratz's paper before the Chemical Society, published in a magazine in April of 1920, as an anticipation of the patent. Upon affidavits being furnished by Weiss to sustain a claim that he had discovered the qualities of DPG as an accelerator prior to the Kratz paper, the patent eventually was issued. The proceeding in the Patent Office was entirely *ex parte*, and no testimony was introduced to show any discovery by Kratz prior to the reading of his paper. It

will be noted, also, that the patentee accepted the Kratz paper as a disclosure of the invention claimed in his patent and sought to show the priority of his own discovery, while in the instant case the plaintiff questions the sufficiency of the paper as a disclosure.

The patentee, Weiss, has testified that he began to investigate DPG early in 1918 and made a number of tests with it prior to February of 1919. Despite the rule that all tests should be recorded in the "X Book", no test of DPG appears therein prior to February, 1919, except one by Weiss' predecessor, Baldwin, in 1917. Three tests appear under dates of the early part of the year 1919. Of these, two are in connection with shoddy compounds, and were of little significance. The other now appears of the date "2-10-19." A casual examination discloses that the month has been changed; and an examination under a strong glass plainly shows that the "2" was originally "9", thus making the original date September 10, 1919, three days after Kratz's table of accelerators had been given to Weiss. This test was with new rubber, and not with shoddy, the ordinary stock of the plant. This has some slight significance in itself. Weiss in his testimony refers to this test as the first successful experiment with DPG.

After the meeting of the Chemical Society and the reading of the Kratz paper, a number of tests appear. Some of them are undated, it is true, and Weiss claims they were made in the Summer of 1919. Since they follow tests dated in October of 1919, and precede other tests dated in October, November and December, it is impossible to accept his testimony in this respect.

The testimony of Weiss has been supported by other witnesses in the plant. Their testimony is intended to establish completion of the discovery of DPG prior to Dr. Kratz's paper on September 6, 1919. Chief of these witnesses was M. H. Daniels, the immediate superior of Weiss in the Republic Rubber Company. He has testified that Weiss discussed DPG with him early in 1918, and that

he had knowledge that thereafter tests were being made of the substance. His exact knowledge of the progress of this investigation at any particular stage is by no means made plain by his testimony. Daniels attended the Chemical Society meeting at which the Kratz paper was read. Upon his return he delivered his notes of the Kratz paper to Weiss, and now alleges that he told Weiss that the paper confirmed their own findings as to DPG. But the exact nature of these findings does not clearly appear. That a complete discovery of the qualities of DPG had then been made, seems impossible under the surrounding circumstances. The test book actually showed only two inconclusive tests by Weiss. The Company during 1919 was mainly interested in TPG as an accelerator and was constructing a plant to manufacture it commercially; and it was investigating TPG as late as December 1, 1919, when Daniels wrote to one Stevens, a chemist of the Company, that he (Stevens) was spending "too much time on triphenyl. * * * Diphenyl is King pin now." The tests of DPG, subsequent to Kratz's paper, which were recorded, were quite numerous; but even so, the results were never imparted to the superior officer of Daniels, according to his testimony (see Clark, p.). Daniels has stated that he did impart information of the investigation to Mr. Clark in the summer of 1919, but that he also said: "I wasn't prepared to say how good it was." Still more convincing of the unreliability of the claim of complete discovery prior to September 6, 1919, is the admitted fact that the Republic Rubber Company never used DPG in the manufacture of any goods prior to the departure of Weiss on March 1, 1920. If a complete discovery of the powers of DPG had been made by Weiss, and was known to Daniels, it is almost inconceivable that not one trial of it should be made in actual manufacture.

In addition to these side-lights on the testimony of Weiss and his supporting witness, Daniels, the testimony discloses certain other matters that materially affect the weight of their testimony. Despite the fact that the Republic Rubber

Company never used DPG in making any articles, Daniels, in support of the patent application, made an affidavit wherein he stated:

> "These tests were also carried out in the compounding laboratory for the various departments of the Republic Rubber Company at Youngstown, Ohio, and the accelerator proved to be highly efficient as an accelerator in the actual vulcanization of rubber goods, such as hose, tires, belts, valves and other mechanical goods."

The manifest effect of the immediately foregoing was, at best, to create a false impression. In the same affidavit, a certain undated memorandum of test (copy attached to affidavit) was alleged to have been made "early in the year 1919." Daniels, in the instant case, said the entry was made late in the year 1919 or early in the year 1920. The context plainly shows the entry was not made early in 1919. This was a vital matter before the Patent Examiner, and whether such inaccuracies of statement are the result of carelessness or otherwise, the effect of them is to seriously affect the credit to be given the whole testimony.

Weiss' testimony in the instant case shows various contradictions of statements made in prior steps in the case, some in regard to material matters. Mere variation in recollection at different times is not always vital; but when by means of the variations the testimony becomes more favorable to the contentions of the witness with each successive delivery, the Court is required to scrutinize it with some care.

Certain other witnesses have been produced on behalf of the plaintiff. They were employees within the plant of the Republic Rubber Company, connected with the chemists only in the handling of tests. Having kept no records, and being unacquainted with the accelerator in the mix handled, it is not probable they would remember exact dates at the end of seven years. We feel that the circumstances, as well as our observation of the witnesses, preclude us from giving

great weight in the attempt to fix Weiss' discovery of DPG as prior to Kratz's disclosure.

The credible testimony shows that prior to September 7, 1919, the patentee, Weiss, made several tests with DPG; but those tests were so few in number and so inconclusive in results that no legitimate claim can be made to a knowledge of the superiority of DPG over TPG as an accelerator. We find as a fact, therefore, that Morris L. Weiss did not independently discover the efficacy of DPG as an accelerator of vulcanization prior to the delivery of the Kratz paper on September 6, 1919. But even had our finding in this respect been otherwise, the testimony discloses that not only had another disclosed the subject-matter of the patent to the world in advance of the patentee, but that others had also discovered the qualities of, and had used, DPG several years prior to the time claimed by the patentee as marking the beginning of his investigations.

In 1916, G. D. Kratz was a research chemist for the Norwalk Tire & Rubber Company. He had a degree in chemistry from Cornell University, and had been a rubber chemist for four years in 1916. In that year he prepared a quantity of DPG and established its efficacy as an accelerator by a number of tests. His investigation included a number of other accelerators, and a table was prepared by him which showed the comparative powers of the accelerators investigated. In this respect, his accomplishment was greater than that claimed by the patentee. While Kratz was engaged in this labor, his associates, Drs. Russell and Spence, were in touch with his work. They have testified to that labor and its results. As further confirmation a copy of Kratz's report to the Norwalk Company has been offered. In 1917 Kratz became Chief Chemist of the Falls Rubber Company. In 1917, he has testified, he used DPG in the manufacture of 300 tires, part of a consignment of 1000 tires sold. In 1918, Kratz repeated his tests of the various accelerators tested in 1916 at Norwalk. His reason for so doing was his desire to verify the previous results in a rubber compound which did not

contain zinc oxide, that material having been a part of the compound when the 1916 tests were made. These tests, with other labor necessary, furnished the foundation facts of the paper read September 6, 1919, and published in April of 1920.

It has been urged by counsel for the plaintiff that the testimony of Kratz as to the actual use of DPG in the manufacture of tires should be ignored, because uncorroborated, and points to the ignorance of subordinate employees of the Falls Rubber Company. There is some documentary evidence which tends to confirm this claim of use, but even if there were none we should not feel justified in rejecting it. To do so would be to impute wilful falsehood to Dr. Kratz, and neither his interest in this case nor his manner and appearance upon the stand was such as to furnish any foundation for that imputation. His knowledge of DPG and the general circumstances make the use of it as an accelerator quite probable.

It is further argued that Kratz's early investigations and discoveries were nothing more than abandoned experiments. The foundation of this claim seems to be based upon the misapprehension that no use of the idea other than actual manufacture or an application for a patent is an actual disclosure of it to the world and a reduction to practice. As a matter of fact the method of disclosure adopted by Kratz called the attention of rubber manufacturers to the discovery far more effectively than would have a patent application quietly filed in the Patent Office. As to what constitutes reduction to practice, see *Curtiss* v. *Janin*, 278 Fed. Rep. 454. Nor is the claim of abandonment to be established by pointing to the fact that no use of DPG followed Dr. Kratz's disclosure. In making use of such an argument counsel for plaintiff is attempting to bring the subject matter of this patent, to which plaintiff is not entitled, within the scope of another patent which does belong to it so far as the evidence of this case discloses. DPG was not used by rubber manufacturers after the Kratz disclosure, not because its efficacy was unknown or doubted, but because no method was known for its cheap

manufacture. Weiss devised a method which made possible its commercial use, and, so far as appears, accomplished something of great value. He filed an application for a patent upon this method some five months prior to his application for the patent in the instant case, and eventually was granted it. But disclosure of a method of cheap manufacture does not entitle a patentee to claim a monopoly in the use of an article whose qualities were disclosed by another. Commercial use is one thing, discovery another, although, it is true, such use may, under certain circumstances, throw light upon the novelty claimed for a patented device. Those reasons do not exist here, where the reason for non-use prior to plaintiff's method patent fully appears.

In reaching our conclusion that Morris L. Weiss was not the actual and independent inventor and discoverer of DPG as an accelerator, we have endeavored to consider the questions involved without being unduly affected by the action of other Courts in litigation upon the patent in suit; and, owing to the difference in opinion in such Courts, we trust we have been able to do so.

Let a decree be drawn in accordance with the finding of above opinion.

IN THE

UNITED STATES CIRCUIT COURT OF APPEALS

FOR THE THIRD CIRCUIT.

DOVAN CHEMICAL COMPANY,
Plaintiff Below,
Appellant,

vs.

CORONA CORD TIRE COMPANY,
Defendant Below,
Appellee.

No. 3470 October Term 1926.

On appeal from the District Court of the United States for the Western District of Pennsylvania.

Before BUFFINGTON, WOOLLEY and DAVIS, Circuit Judges.

FRALEY and PAUL, Solicitors for Appellant, JOHN W. DAVIS, JAMES M. NICELY, JULIAN S. WOOSTER and JAMES J. KENNEDY, of Counsel for Appellant.

DEAN S. EDMONDS, FRANK E. BARROWS and RAYMOND F. ADAMS, of Counsel for Appellee.

BUFFINGTON, Circuit Judge. This case concerns the acceleration of rubber vulcanization. As the patent here involved and the art to which it appertains has been set forth at length in an opinion reported at 292 Fed. Rep. 555, a case in the Second Circuit involving the same patent and

also in the exhaustive opinion of the Court below in this case, reported at 10 Fed. Rep. (2d) 598, we avoid repetition by referring thereto. The proofs show that Morris L. Weiss, the grantee of the patent here involved, was a chemist employed by a rubber company. During the course of his work and moved by a suggestion in Richter's Chemistry, Weiss, in March, 1918, conceived the idea that a well-known laboratory product, diphenylguanidine, known by the chemical symbol D. P. G., and listed by Richter as an accelerator, might be used in accelerating the vulcanization of rubber, and then so told Carlton, the chief chemist of the factory. The chemical properties of D. P. G. as a laboratory element, were of course known as an abstract truth, but no one prior to Weiss seems to have conceived and worked out any practical plan by which D. P. G.'s potential powers could be commercially used. The reason for this is plain for no one knew, or, for that matter, had tried to learn, how D. P. G. could be produced in such quantity as to make possible its commercial use. Having conceived the general idea and made at the factory where he was employed some recorded laboratory experimental work under various dates, Weiss took up the problem of trying out D. P. G. as a vulcanizer and of devising some way to make D. P. G. in such quantity that it could be practically used commercially. The problem was untried and difficult. He first set about making laboratory D. P. G. and in September, 1919, Weiss had produced five grams which by December he had tested with the ordinary rubber batches and found it powerfully accelerated, but the rubber product was overcured. However, he was encouraged by them and shortly thereafter his experiments resulted in a perfect cure which was recorded in an experimental book under date of February 10, 1919, a date which as we shall hereafter see is challenged as being changed to that date from September 10, 1919. Under date of February 21, 1919, another successful test, this time with a shoddy compound, was entered in the same book and another with shoddy on March 4, 1919. These experiments proved the

workable worth of D. P. G. as an accelerator in vulcanizing rubber, but Weiss stopped working further in that line as his supply of D. P. G. had been exhausted. He then turned his attention to discovering some way to make D. P. G. commercially. His efforts in that line resulted in his discovery disclosed and practically utilized in the patent in suit. We here note that he was told he could not get a patent for an accelerator, but, later on, finding he could patent his original discovery, he applied on November 12, 1921, for a patent thereon and on March 28, 1922, was granted the patent in suit, No. 1,411,231. This patent, regularly granted, under the authorities, is *prima facie* evidence of its validity and unless successfully challenged warrants a decree in this case as infringement is clear.

Such attack is here made and is based on two grounds, viz: first, denial of patentable invention and second, that, if patentable, Weiss was not the original inventor thereof.

Addressing ourselves to the question of patentable invention, we find ourselves in accord with the patent office's action in the grant of the patent. In the first place the worth of D. P. G. as an accelerator is evidenced in its use by the defendant, by the mass of testimony, array of counsel and earnest effort here very properly made to ensure its continued use by this litigation. Its use has been extensive in the art, it has reduced the time of vulcanization, obviated overcuring and increased the character and worth of the product. These elements, while not conclusive, are evidential of its worth in the art. Assuming for present purposes the *prima facies* of Weiss' patent stands, and the statement in his specification: "I have discovered that disubstituted guanidines particularly diphenylguanidine is particularly effective for this purpose" is true, and if he showed the world in addition how to make this product in commercial quantity in the rubber vulcanizing art, it would seem to us, and we so hold, that a claim, such for example as his eighth, viz: "The process of treating rubber or similar materials, which comprises combining with the rubber compound a vulcaniz-

ing agent and diphenylguanidine," was inventive in character and valid. In that regard we agree with Judge Manton's holding, when this patent was before him in the Second Circuit, that it involved invention, viz:

> "I am satisfied that the use of diphenylguanidine as in the plaintiff's process, involved invention. Using it advanced the art of rubber making. Its utility and the consequences which followed, fully support the real practical test of the sufficiency of an invention. Where the utility is proved to exist in any degree, a sufficiency of invention to support the patent must be presumed. (Smith *vs.* Goodyear, 93 U. S. 486.) This substitution involved a new process of manufacture to develop a new use of the properties of diphenylguanidine and there was a new and useful result obtained. (See Smith *vs.* Goodyear, *supra;* Rumford Chemical Works *vs.* N. Y. Baking Powder Co., 134 Fed. 385; Genl. El. Co. *vs.* Hoskins Mfg. Co., 224 Fed. 464)."

The process then being new, useful and inventive in character, it remains to inquire whether the *prima facies* of inventorship which the patent vested in Weiss is overcome by proof of the standard the law requires, that someone else was the inventor thereof. Turning then to the patent to see what Weiss disclosed and, consequently, what alleged prediscoverers must convincingly prove they had discovered and disclosed before him, we note the specification states generally: "The object of my invention is to improve rubber compounds so that the finished product shall be of superior quality and so that the time required for vulcanization shall be greatly reduced over that ordinarily required for such purpose. * * * I have discovered that di-substituted guanidines particularly diphenylguanidine is particularly effective for this purpose. * * * Down to the time of my researches in accelerators of this type, it was apparently not known that di-substituted guanidines were efficacious or useful as accelerators in vulcanizing, nor that this substance could be produced in sufficiently large quantities in

a substantially pure form, or at a sufficiently low cost to be available for this purpose."

The specification then states that in another patent, viz: Serial 482,143, he has disclosed "a process for producing and purifying diphenylguanidine in commercial quantities" and after disclosing fully how, in what proportions and under what heat conditions, the D. P. G. was to be used, Weiss set forth desirable results thereby obtained, viz:

> "It will therefore be appreciated that when using the accelerator according to my invention the vulcanization is accomplished by using comparatively small quantities of the accelerator, thereby obviating undesirable loading or adulteration of the rubber compound. Furthermore, by the use of such accelerator, the texture and durability of the final product is greatly improved and the tendency commonly present in vulcanized rubber to bloom and become brittle with age is greatly reduced if not entirely obviated. My improved accelerator is particularly useful and valuable, where it is desired to produce a harder or less elastic portion in an article leaving other parts which are required to be more elastic and flexible, such as in automobile tires where the bead-stock is usually made harder than the body or carcass of the tire proper. The relative amounts of vulcanizing agent and accelerator may be so proportioned that the various parts of a single article may be cured to different degrees of hardness without danger of over-curing the softer or more elastic parts."

It will thus be seen that summarized Weiss' claim of invention was, first, that no one before him had known that D. P. G. was efficacious or *useful* as an accelerator in commercial vulcanizing; second, no one had known that D. P. G. could be produced in quantity, in pure quality or at a cost to permit its use in vulcanizing; third, that Weiss was the first to solve this second problem by his patent No. 482,143; fourth, that the solution of this second problem enabled him, for the first time in the rubber vulcanizing art, to commercially use D. P. G.

Without entering into details and a discussion of the proofs we may say they satisfy us that Weiss was the first to instruct the rubber art in this mode of rubber vulcanization and that up to his work the rubber art had made no use of D. P. G. in vulcanization and no one had therefore disclosed to the art or instructed it how D. P. G. could be practically produced or, of course, practically used. As showing the foremost advance, knowledge and practice in the rubber art in that regard, we take the exhaustive paper prepared by Dr. G. D. Kratz and his associates and read by him on September 2, 1919, at a meeting of The American Chemical Society in Philadelphia and published in April, 1920, in the Journal of Industrial & Engineering Chemistry. We feel justified in regarding this paper as evidencing not only the highest point of advance by the art in general but the highest point reached by the three men in their individual prior research and practical results attained. Here was a convention of the leading scientific minds of the rubber industry; here was an opportunity to disclose an invention of vast importance to that art, if it had been made, and to give the public instructions in a novel and untilled field, and in that field, barren of any attempt to use D. P. G. Therefore, to assert inventive priority and to foreclose all subsequent claimants of invention in that regard by there announcing and showing the thing had been done, was now disclosed and the art enabled to now use D. P. G., was an opportunity not to be neglected.

Assuming for present purposes that Dr. Kratz and his associates had conceived the idea of the practical and commercial use of D. P. G. in the rubber art, did this paper so state? Conceiving they had devised some way to make D. P. G. commercially, did the paper tell the art how it could be done? That the paper did not give such information is clear. A contemporaneous report of the meeting and the paper in question made to his company by Williams, a chemical representative of a rubber company, who attended the meeting, may be taken as illustrative of the effect it made

on the most highly skilled minds in the art, for after giving an analysis of what the paper meant to him, in which we find no such disclosure as Weiss made in his patent, Williams adds: "The symposium on the action of accelerators which followed was unimportant as every one seemed to try to conceal all he knew on the subject, but obtained all the information possible from others". And indeed that withholding of information from the rubber art, and not disclosure of a workable advance was the very purpose of the paper of the authors and was testified to by one of their number who said:

> "We absolutely had no intention of giving any information which any other company or competitor could transpose directly for *practical* purposes. Our idea, however, did give enough information so that any reputable chemist would be guided by the information in the paper.
>
> Q. Guided to the extent of being put on inquiry, to find out for himself anything you did not say—is that right?
>
> A. Guided to the extent of stimulating investigation along the same lines with which we were pioneering.
>
> Q. And without telling him what to investigate?
>
> A. No, sir. We gave him two tables of what to investigate.
>
> Q. But, I mean, you did not tell him any specific substance to investigate?
>
> A. Well, we gave him two tables of substances, which we pointed out were excellent accelerators.
>
> Q. And he could take his choice from any one of the substances mentioned in the two tables?
>
> A. Absolutely.
>
> Q. And go on investigating for himself?
>
> A. Yes, sir, because there is no one accelerator of universal application or universal quality."

And this estimate by Dr. Kratz of the purpose of the paper, namely, an invitation to experimental research, is evidenced by what influence the paper had in the case of Weiss personally. Daniels, who was Weiss' chief, attended the meeting in Philadelphia and took notes of the tables in the paper,

and on his return, as he testified, he did "immediately tell Weiss that the statements made in the paper read by said Kratz confirmed our experience with D. P. G. as to accelerating, and that we should continue to work on that substance and develop a commercial process if possible."

It will thus appear that the paper of Kratz and his associates had no effect on the working art. No one made any practical use of it. No one in the art selected D. P. G. from the several accelerators named in its tables and used it in the vulcanization of rubber. No special emphasis was laid on D. P. G. in comparison with other substances so named and it is quite evident that if advance in the art had stopped with the Philadelphia paper the art would not have had the information and advance disclosed by Weiss in his patent specification and would not have made the successful advance which followed Weiss' disclosure. Such being the negative results produced by the paper, we cannot accede to the proposition that its theoretical statements, valuable as they were, forestalled or even fore-shadowed the clearcut, practical conception which Weiss then purposed and which he later practically worked out, namely, the successful pioneer making of D. P. G. commercially, and when made successfully and pioneeringly using it in the rubber vulcanizing art.

In arriving at the conclusion that the *prima facies* of Weiss' patent has not been met, we deem it proper to say that while we have not discussed, we have not overlooked, the many other matters disclosed in the proofs and argued by counsel. We have only discussed what we regard as its decisive features but we deem it proper to say, without discussing the evidence, we have reached the conclusion that the time date of entry by Weiss in the experiment book was February 10, 1919, as contended by the plaintiff and not September 10, 1919, as contended for the defendant. We deem it proper to say also that we have not discussed the technical contents of the Philadelphia paper for two reasons; first, our technical inability to do so; and second, the need-

lessness of doing so, had we been able, because for the purposes of this case, we have the evidence of its reader, uncontradicted by his associates, that its purpose was not to disclose a useful, workable process, but on the contrary not to do so.

In reaching the conclusion we have we regret to find ourselves at variance with those reached by two Circuit Judges of the Second Circuit, reported at 292 Fed. Rep. 555, heretofore referred to, but such regrettable divergence of view is lessened by the fact that the views of two other Circuit Judges of that Circuit are in accord with our own.

So holding, the decree entered below will therefore be reversed and before the mandate goes down an opportunity will be given counsel to agree as to its form.

WOOLLEY, *Circuit Judge*, dissents.